

Sub  
E1  
Conced  
B)  
Cont

Application No. 09/363,121

where  $T_d$  is an approximate thickness of the inner graphite layer along each rounded inside corner tangentially joining adjacent cone walls of the rectangular cone portion, and  $T_v$  is an approximate thickness of the inner graphite layer disposed on inside vertical walls of the cone portion.

#### REMARKS

The above identified patent application has been amended and reconsideration and reexamination are hereby requested.

Claims 1 and 2 are now in the application. Claims 1 and 2 have been amended.

The Examiner has rejected Claims 1 - 2 under 35 U.S.C. §103(a) as being unpatentable over Tsuneta et al. in view of Jang and Kim.

The Applicant's amended Claim 1 calls for (underlining added for emphasis) ... a funnel formed between the panel and the neck, and having a substantially rectangular cone portion contiguous to the neck, the substantially rectangular cone portion having rounded inside corners tangentially joining adjacent cone walls of the rectangular cone portion ... an inner graphite layer disposed on an inner surface of the funnel to form a path for transmission of the voltage, wherein the inner graphite layer satisfies the following condition:

$$0.9 \leq T_d / T_h \leq 1.36$$

where  $T_d$  is an approximate thickness of the inner graphite layer along each rounded inside corner tangentially joining adjacent cone walls of the rectangular cone portion, and  $T_h$  is an approximate thickness of the inner graphite layer disposed on inside horizontal walls of the cone portion.

The Applicant's amended Claim 2 calls for (underlining added for emphasis) ... a funnel formed between the panel and the neck, and having a substantially rectangular cone portion contiguous to the neck, the substantially rectangular cone portion having rounded inside

corners tangentially joining adjacent cone walls of the rectangular cone portion ... an inner graphite layer disposed on an inner surface of the funnel to form a path for transmission of the voltage, wherein the inner graphite layer satisfies the following condition:

$$0.9 \leq T_d / T_v \leq 1.36$$

where Td is an approximate thickness of the inner graphite layer along each rounded inside corner tangentially joining adjacent cone walls of the rectangular cone portion, and Tv is an approximate thickness of the inner graphite layer disposed on inside vertical walls of the cone portion.

Applicants submit that the invention as claimed in Claims 1 and 2 are neither taught, described or suggested in Tsuneta et al., even in view of Jang and Kim.

The present invention provides for a uniform layering of graphite over a cathode ray tube cone portion's vertical surfaces, along tangentially-rounded corners to the cathode ray tube cone portion's horizontal surfaces. This aspect is noted in Fig. 4, and particularly in the blow-up depiction of the Td dimension.

While Tsuneta et al. may describe a wide angle type cathode ray tube and Jang and Kim may describe graphite coating on the inner surfaces of the funnel portion, their focus is on surfaces, not junctions, and not corner junctions, in particular. The Applicant submits that dealing technologically with junctions and corners is not a trivial engineering exercise. Junction areas do not lend themselves to uniform application of layered materials. For example, corner accumulations can be formed when layers are applied to intersecting surfaces. If two planar surfaces, such as a vertical planar surface (e.g., "wall") and a horizontal planar surface (e.g., "floor") come into contact with each other at right angles and a uniform graphite layer having a thickness "a" is applied to each surface, a corner thickness would have a (1.414) X ("a") dimension and not a mere ("a") dimension. This dimensional calculation is without even taking into

Application No. 09/363,121

consideration any possible material buildup at such a wall/floor-type junction when layers are physically applied to both surfaces. This is illustrated in the accompanying example page. Accordingly, the Applicant submits that it would not be obvious to combine references dealing with cathode ray tube surface coatings to arrive at a solution dealing with corner junctions.

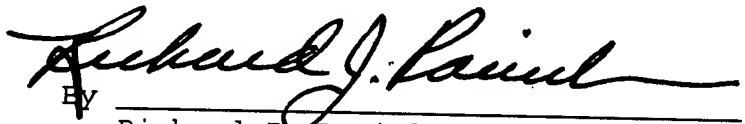
Accordingly, the Applicants submit that Claims 1 and 2 are not unpatentable over Tsuneta et al. in view of Jang and Kim.

Accordingly, in view of the above amendment and remarks it is submitted that the claims are patentably distinct over the prior art and that all the rejections to the claims have been overcome. Reconsideration and reexamination of the above Application is requested.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP



By

Richard J. Paciulan  
Reg. No. 28,248  
626/795-9900

RJP/cah



VERSION WITH MARKINGS TO SHOW CHANGES MADE

RECEIVED  
APR 11 2002  
TECHNOLOGY CENTER 2800

1. (twice amended) A cathode ray tube comprising:
- a panel having a phosphor screen;
  - a cylindrical neck having an electron gun assembly disposed therein for generating a plurality of electron beams;
  - a funnel formed between the panel and the neck, and having a substantially rectangular cone portion contiguous to the neck, the substantially rectangular cone portion having rounded inside corners tangentially joining adjacent cone walls of the rectangular cone portion;
  - an anode button on the funnel to supply a voltage in the funnel; and
  - an inner graphite layer disposed on an inner surface of the funnel to form a path for transmission of the voltage,
- wherein the inner graphite layer satisfies the following condition:

$$0.9 \leq T_d / T_h \leq 1.36$$

where  $T_d$  is an approximate thickness of the inner graphite layer along [on] each rounded inside corner tangentially joining adjacent cone walls of the rectangular cone portion, and  $T_h$  is an approximate thickness of the inner graphite layer disposed on inside horizontal walls of the cone portion.

2. (twice amended) A cathode ray tube comprising:
- A panel having a phosphor screen;
  - a cylindrical neck having an electron gun assembly disposed therein for generating a plurality of electron beams;
  - a funnel formed between the panel and the neck, and having a substantially rectangular cone portion contiguous to the neck, the

substantially rectangular cone portion having rounded inside corners tangentially joining adjacent cone walls of the rectangular cone portion;

an anode button on the funnel to supply a voltage in the funnel; and

an inner graphite layer disposed on an inner surface of the funnel to form a path for transmission of the voltage,

wherein the inner graphite layer satisfies the following condition:

$$0.9 \leq T_d / T_v \leq 1.36$$

where  $T_d$  is an approximate thickness of the inner graphite layer along [on] each rounded inside corner tangentially joining adjacent cone walls of the rectangular cone portion, and  $T_v$  is an approximate thickness of the inner graphite layer disposed on inside vertical walls of the cone portion.